



NATIONAL WEATHER SERVICE, LAS VEGAS NEVADA

The Desert Sun

SKYWARN Spotter Newsletter

Fall 2013

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This newsletter serves the following counties:

Nevada: Clark, Lincoln,
Nye, Esmeralda

Arizona: Mohave

California: Inyo,
San Bernardino

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Spotter News

Hello fellow storm spotters. What a crazy monsoon season we had this year. It was one of the most busy in recent memory and it certainly kept everyone on their toes. It seemed that we had everything this year including significant flash flooding, wildfires, debris flows, damaging winds, and even the reports of a funnel cloud or two. We really appreciate all the information you have given us over the summer and both our facebook page and twitter came in extremely handy and we received more reports than ever before. We will be spending the next couple of months retooling our spotter program with new slides and information and I really do look forward to holding more spotter talks early next year. Remember, if you would like us to give a spotter talk to your local group, please email me with any questions. Thanks again!



- **If you are in a SAFE location and have a chance to shoot video/pictures, please share them with us for inclusion in future presentations/newsletters.**
- **Also, please DO NOT assume that we know what is happening at your location. If you think its important please relay the information to us. We enjoy hearing from everyone, especially during severe weather.**



Smoke plume from the Carpenter 1 Fire on July 8th. Photo Credit: Mike Kennedy/NWS Las Vegas.

An Active Start To Summer: Heat, Fire and Thunderstorms

Chris Stachelski

Forecaster

The heat was on but so were the smoke and storms in the summer of 2013. From late June through the end of July, several significant weather events took place in the Mojave Desert and southern Great Basin that put weather in the headlines not just locally but nationally and even internationally. Here is a look back at some of the highlights.

Western Super Heat Wave 2013

A strong and sprawling area of high pressure aloft settled in over the southwestern United States on Thursday, June 27th and remained over the region for the following week and strengthened. This area of high pressure initially set-up near the Four Corners region before migrating west toward Nevada by Saturday, June 29th. This resulted in a long duration stretch of well above normal temperatures across the Mojave Desert and southern great basin with numerous locations setting daily, monthly and even all-time record high maximum temperatures. The heat finally eased by Friday, July 5th, as the center of the area of high pressure shifted into southern Arizona and weakened in response to a mid and upper level trough that pushed ashore into northern California.

This event set a number of impressive records across our area. At the official weather station for Las Vegas at McCarran International Airport, the high temperature on June 30th reached 117 degrees which set a new all-time record high for the month of June. The previous record was 116 degrees set on June 15, 1940. The high temperature of 117 degrees on June 30th tied the all-time record high for Las Vegas last set on July 19, 2005 and first set on July 24, 1942. There were 4 days with a high of 115 degrees or greater between June 28th and July 2nd which ties 1937 and 1979 for the second highest number of such days in a year. In addition, the low of 95 degrees at McCarran Airport on July 1st tied the all-time record high minimum temperature for any month set on July 19, 2005.

At Death Valley, California a high of 129 degrees on June 30th set a new all-time record high for the month of June. The previous record was 128 degrees set on June 29, 1994 and tied on June 29, 2013. The 129 degree high also ties the United States record high temperature for the month of June first set on June 23, 1902 at Volcano, California which is a former town near the Salton Sea. From June 28th through July 5th, there were 8 consecutive days with a high temperature of 125 degrees or greater at Death Valley. The all-time stretch of such days is 10 days from July 5-14, 1913. In addition, there have been 10 days this year with a high temperature of 125 degrees or greater which ties the record for any year which is 10 set in 1913.

Other impressive readings recorded during this event included two consecutive days with highs of 109 degrees at Bishop, California on June 30th and July 1st (which is only one degree off the all-time record high for Bishop), an all-time June record high of 123 degrees at Needles, California on June 29th and a new all-time June record high of 112 degrees at Kingman, Arizona on June 29th.



Photo of the 129 degree high temperature recorded in Death Valley, California on June 30th.

Photo Credit: National Park Service.



The Dean Peak and Carpenter 1 Wildfires

Although the heat dominated headlines initially in July, the focus quickly turned to wildfires. Mid-level moisture pulled northwest by the flow around the same area of high pressure sparked thunderstorms which triggered lightning that started several wildfires. The Dean Peak Fire started on June 29th on Hualapai Mountain, Arizona and continued to burn into early July before being put out. About 5,400 acres burned on Hualapai mountain and numerous residents had to evacuate.

On July 1st, lightning started a wildfire in Trout Canyon on Mt. Charleston, Nevada. The Carpenter 1 Fire eventually burned nearly 28,000 acres and at one point was the Nation's largest active wildfire. Evacuations were ordered for Trout, Lovell and Kyle Canyons on Mt. Charleston. At least 6 structures burned in the fire and at least two debris flows were triggered by the fire after thunderstorms unleashed heavy rain onto burned land. The wildfire created a thick layer of smoke over the Las Vegas Valley at times and the flames could be seen in the distance on many nights. In addition, ash from the fire fell on many days in the far northwest portions of Las Vegas and far north portions of North Las Vegas and covered surfaces with a light coating. The increase in humidity and rainfall helped to finally bring the Carpenter 1 Fire under control around July 12th.

Summer Storms

Although thunderstorms were around early in July, the first very active day of the 2013 monsoon season took place on July 12th. A significant flash flood took place near Nelson, Nevada and resulted in debris washing all the way down toward Lake Mohave.

From July 18th through July 23rd, the Mojave Desert and southern Great Basin saw numerous thunderstorms. On July 18th, thunderstorm outflow produced a 60 mph wind gust in Kingman, Arizona that knocked down some trees. Another outflow boundary further north in Mohave County, Arizona kicked up dust that resulted in poor visibility along Pierce Ferry Road. This resulted in a four vehicle accident that saw 2 people injured.

On the evening of July 19th, a thunderstorm developed near Nellis Air Force Base along an outflow boundary and moved south across the Las Vegas Valley. This storm was one of the most intense ever to cross the valley with respect to wind. Nellis Air Force Base measured sustained winds of 59 mph with a gust to 71 mph. Damage was greatest in the area in and around Nellis Air Force Base and in Chinatown. One apartment building was evacuated after a gas line broke. At least 12 buildings throughout Las Vegas had wind damage. Power was knocked out to casinos on Fremont Street and parts of The Strip. In addition, heavy rains caused up to two feet of water to flow across parts of The Strip. Water damage also occurred at 3 strip casinos from the rain, including a portion of the casino floor at Caesars Palace. Some 33,000 NV Energy customers lost power from this storm. The following evening, more thunderstorms moved south across the Las Vegas Valley. Strong outflow winds of up to 64 mph impacted the northwest part of the valley. Powerful thunderstorms hit Henderson with wind gusts up to 69 mph and hail up to 1.75 inches in diameter. Many streets were flooded in Henderson.

Another active period for thunderstorms was on the 27th and 28th, when storms developed across much of the area. Again, flash flooding took place and impacted more roads. On the 28th, a bus drove through floodwaters in Mohave County on the way to the Grand Canyon Skywalk. Although the bus was swept away with 33 people on board, no one was injured. Drier and more stable air moved in from the southwest allowing July to end on a quieter and cooler tone.



Pinkish haze cast over the Las Vegas Valley by the July 19th thunderstorm as it moved south toward The Strip. Photo Credit: Chris Stachelski/NWS Las Vegas.

Heavy Rain and Burn Areas

After the Carpenter One Fire and the Dean Peak Fire flash flooding and debris flows become a major concern. During a normal heavy rain event over an unburned area, rainfall and its runoff is typically slowed by vegetation and much of the water seeps into the soil. However, after a major fire and followed by a significant heavy rain event, flash flooding and subsequent debris flow can be enhanced by the lack of vegetation and exposed bare ground. All of the ash, soot, and other loose sediment can accumulate and form debris flows that can move quickly down a mountainside and damage anything in its path. Several debris flows were noted this year and some did significant damage to roads in northwest Las Vegas and to roads east of Kingman near the Dean Peak Fire. Although some effort has been made to seed the mountainsides with new vegetation, debris flows will likely be a concern anytime there is heavy rain over the burn area over the next few years.

Storm Spotter Photo Page

I would like to thank all the Spotters who sent in pictures over the past few months. Please make sure to include permission for us to use them. Thanks again for all your efforts and we enjoy receiving your photos.



Flooding in Kingman / July 27 - Photo: Lisa Walsh



Flooding and Debris Flow in NW Las Vegas- Photo: NWS Staff



Lightning near Moapa, NV - Photo: Guy DeMeo



Lightning over Red Rock Canyon.- Photo: Alicia Cardenas



Staffing Changes at NWS Las Vegas

Chris Stachelski

Forecaster

Spring and summer 2013 have brought more staff changes to your National Weather Service office in Las Vegas. At the end of March, hydrometeorological technician Brian Fuis retired. Brian joined NWS Las Vegas on May 5, 1991 when our office was still located at McCarran International Airport. In his early days at NWS Las Vegas, Brian provided a variety of services for southern Nevada including taking manual weather observations, issuing statements on hazardous weather and helping to maintain the office's computer system known as AFOS, then used to compose statements and warnings. In 1995, when our office relocated to our current location, Brian continued as a staple on our Public Service Unit desk, taking spotter reports, quality controlling weather observations and frequently answering our phones. Many of our long time spotters and partners have likely talked to Brian over the years. Brian came to our office after working at the former National Weather Service office at Los Angeles International Airport where he provided pilot weather briefings. Brian started his federal service with the United States Air Force before joining the National Weather Service for a brief stint at the now closed Olympia, Washington office.

At the end of June, our Administrative Support Assistant, Rosalin Cianflocco, transferred to the NOAA Fisheries Office in Long Beach, California to move closer to her family. Rosalin joined NWS Las Vegas in late 2007 after working at NOAA Fisheries in Long Beach. Rosalin was a big help to many of us at NWS Las Vegas for all sorts of odds and ends including helping to send paper copies of the *Desert Sun* newsletter when we still manually sent copies through the United States Postal Service.

Finally, we say good luck to Mike Kennedy, a journeyman forecaster, who recently left to become a lead forecaster in Pittsburgh, PA. Mike joined NWS Las Vegas in June 2006 after a career with weather in the United States Air Force and graduating from Penn State University with a degree in Meteorology. While at NWS Las Vegas, Mike led our aviation program and worked on many meetings with the aviation community at McCarran International Airport. However, we will also miss many of Mike's technological advances he helped develop or propel over the years at our office including our local models, weather graphics and intranet, amongst others. Mike looks forward to returning to his native state to be closer to his family.

We wish Brian, Rosalin, and Mike K. all the best in their future endeavors!

Desert Sun Word Search

Z R L N J G D Y T H M V L P N Y J E X X T H G L O
O Q E F B H D W L U H I X M M R I Q I D D Q W O P
S G D L M G A I Y L G E U C I O Y U F L O O D W L
W P E K O R M R S H A T T P X S J I Y Y M Y N P M
B I V L N O I Y T I U B T D P I K N R A H N Z R M
D S N I O Q C N E A B F T X Z V H O R E H T A E W
V M N D F R I N S Q H L C O I D S X C M V D Z S G
R G J G Y N Q X T E F P O Z O A C W E H U C C S B
T J Z W G N E E W O L L A H U F H A E K I K X U N
W E H U P U I O T J V M X G N S I A O A R F Y R G
K T M O X K E I U H Z U H O R E Q M K X T N K E A
Y Z O P B P V S Z D U N O O Q V R W X J E E M V Q
P R D M E H L O D O W S T I X A P P B H T M R M W
Y M F V Q R X Q O R N Z V C H E C D O W Q Y H O A
L W T A B M A V E O R R K O O L B L Y C R C W E F
G F P S X D W T M Q L E V F D E L L A F X X F Q A
P M A J Z A D A U A Q S V X E F S G N T A R P R W
J E N B T A U D F R T B F P A R K Z U Y E E A B S
E L Y C B M T K P M E H T D H O V L E A I X I I H
M F H Y X Y L Q W Y U P D Y V S T P U M P K I N G
E P K M Z S K U P O C H R W Y T W P I F E Q W X N
R R W O Y W K T E E X G U Z U F R O R X V R X P N
G H K R L X G J X J N P G K N O W K K T X I I T R
E Y X V E T K O N J T G M J E Z N V O Y Q W M E F
R P P Z M B J B E Q I P Q K T I W M H Q D G M S F

Word Search - The Words

ADVISORY	FOOTBALL	MONSOON	WEATHER
AUTUMN	FROST	PUMPKIN	WINDY
COOLER	HALLOWEEN	SWEATER	
EQUINOX	LEAVES	TEMPERATURE	
FALL	LIGHTNING	WARNING	
FLOOD	LOW PRESSURE	WATCH	

What Type of Information to Report...Fall/Winter Weather

Winter is just around the corner! Although snow rarely falls in most valley locations in the Great Basin and Mojave Desert, the surrounding mountains can receive significant amounts of snow. Here is a reminder of the type of information to report to our office.

- **Snow** – Accumulating 1” or more per hour or any depth on desert floors. If your elevation is under 4000 feet and it is snowing, we would like to know about it.
- **Icing** – Road surfaces that have become ice covered caused by anything. Any icing of trees/shrubs.
- **Fog** – Any visibility caused by fog that is less than 1/2 mile.
- **Wind** - Any measured or estimated winds over 40 mph...especially if its causing travel or visibility problems. Any damage or injuries caused by the wind.

Keep Track Of The Weather With CoCoRaHS

Are you curious as to how much rain or snow fell each time a storm moves through the area? Do you have a rain gauge you frequently check for rain? If so, the National Weather Service in Las Vegas would like to encourage you to join CoCoRaHS, known as the Community Collaborative Rain, Hail and Snow Network. This network allows you to report online how much rain or snow you may have received or even if you saw any hail. Additional comments on the weather in your area that day such as strong winds or storm reports such as flooding can also be submitted. Not only is this information useful to forecasters for verifying forecasts and warnings, but CoCoRaHS also keeps an online record of your reports. This data can then be sorted to compile totals for a given site or see how frequently you received rain or snow in a given time frame. All you have to do to join is visit <http://www.cocorahs.org/> and click on “Join CoCoRaHS” on the left sidebar menu and fill out a short form. While we welcome new observers in all of our communities, our office is especially interested in observers in Mt. Charleston, the Laughlin-Bullhead City area, Searchlight, Beatty, anywhere in Esmeralda County, Lincoln County, the Kingman/central Mohave County area and the Owens Valley. Please contact Chris.Stachelski@noaa.gov or Andy.Gorelow@noaa.gov with any questions.





WANTED!

SPOTTER REPORTS

WHAT TO REPORT:

- **TORNADO** - Circulation in contact with the ground.
- **FUNNEL CLOUD** - Circulation NOT in contact with the ground.
- **WIND** - Causing damage (such as broken tree limbs or power lines) or greater than 40 mph.
- **HAIL** - Any Size. Remember to specify largest size seen.
- **FLOODING** - Of Any Kind! Is the water rising or falling? Flowing or Standing?
- **VISIBILITY** - Under 1/2 mile, caused by anything. Ex. Fog, Snow, Rain
- **SNOWFALL** - Any snow on valley floors or significant accumulations in the mountains.

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REWARD!!